ZEKTOR

Home Theater Switches

Digital Video / Component Video / Multichannel Audio

HDVI5

(Picture of HDVI5)

PRELIMINARY (W.I.P.)

Digital Video Switch

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What's Inside

Thank you for your purchase of your HDVI5 High Definition Component Video Switch.

Every care has been taken to assure you of a successful installation and subsequent operations of your new HDVI5 video switch, however should something go wrong, and warranty repair work is needed, we request that you hold on to the original packaging materials.

Please take this time to verify the contents of the HDVI5 box.

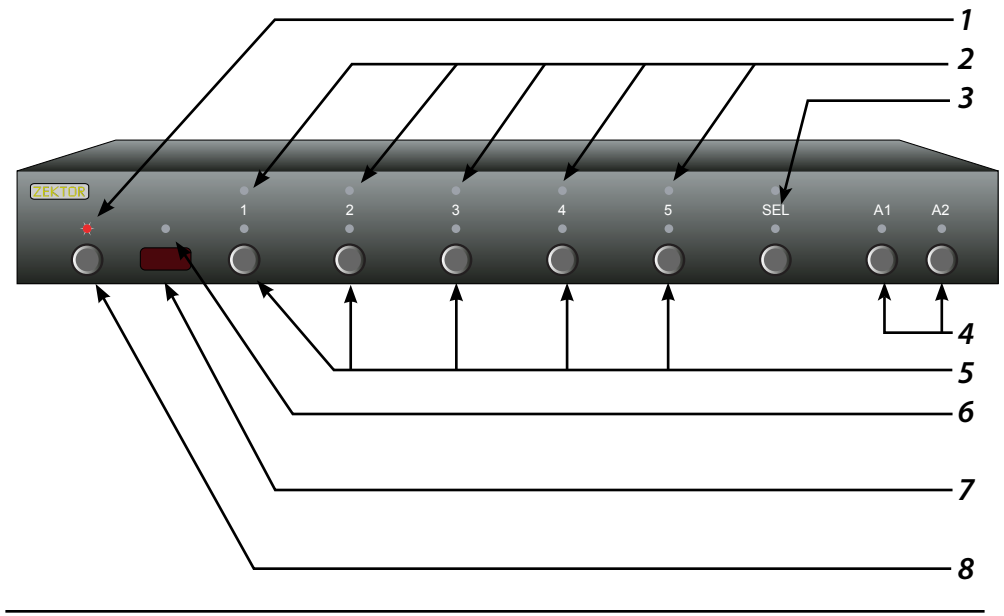
The following should be included:

1. HDVI5
2. Power Supply Module
3. This User's Manual

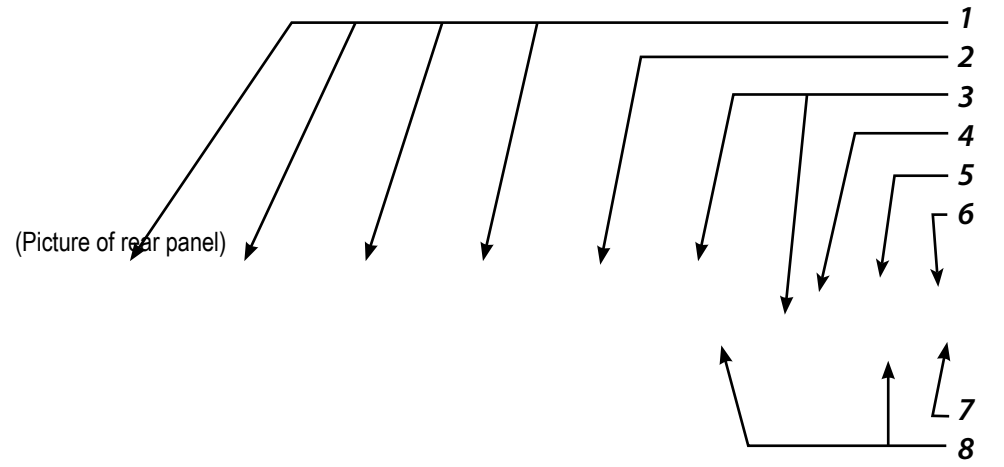
If anything is missing please get in touch with us as soon as possible so that we can correct the situation.

An Overview of the HDVI5

Front Panel



Rear Panel



Front Panel Controls:

1. Power Indicator. Lights up in standby mode.
2. Selection LEDs. Indicate currently selected inputs.
3. Select between Normal/Audio/Video Breakaway.
4. Toggle Auxilary Relays.
5. Input Selection Buttons.
6. Infrared Remote Sensor Window.
7. Infrared Received Indicator. Flashes when IR is received.
8. Power Toggle Button.

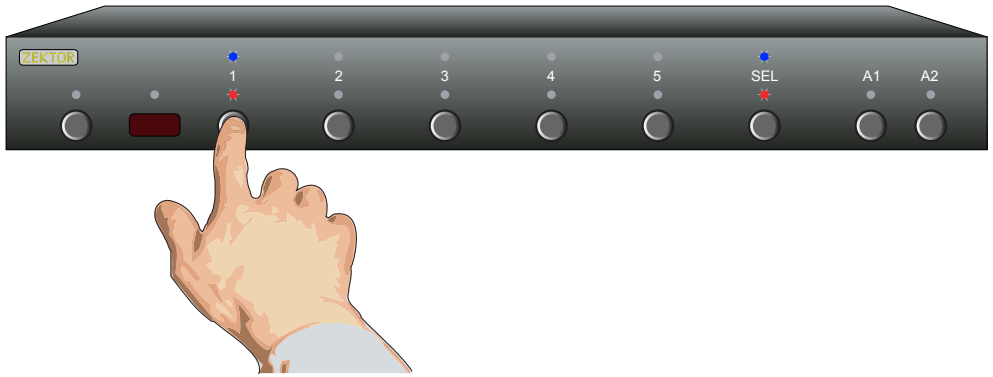
Rear Panel Connections:

1. DVI Inputs. DVI or HDMI (when using conversion cable) compatible digital inputs. All inputs are fully HDCP compatible with both DVI and HDMI formats. All inputs are fully HDMI audio compatible.
2. DVI Output.
3. Digital Audio Inputs. Each input has an associated digital audio channel with both a Coax and an Optical connection. Only one of the two types of inputs can be active at any time. The HDVI5 will auto-select between the two types of signals. If a signal is supplied to both the Coax and Optical inputs, the Coax signal is given priority.
4. IR Input. Accepts modulated or unmodulated IR signals.
5. RS-232 Port.
6. Z-OUT currently unused, reserved for future use.
7. DC Power Jack Connector. Plug in the supplied power adapter into this jack.
8. Digital Audio Outputs. All digital audio inputs are automatically converted to both Coax and Optical outputs. All three outputs are available at all times, and are all individually buffered to allow driving three different digital audio devices simultaneously.

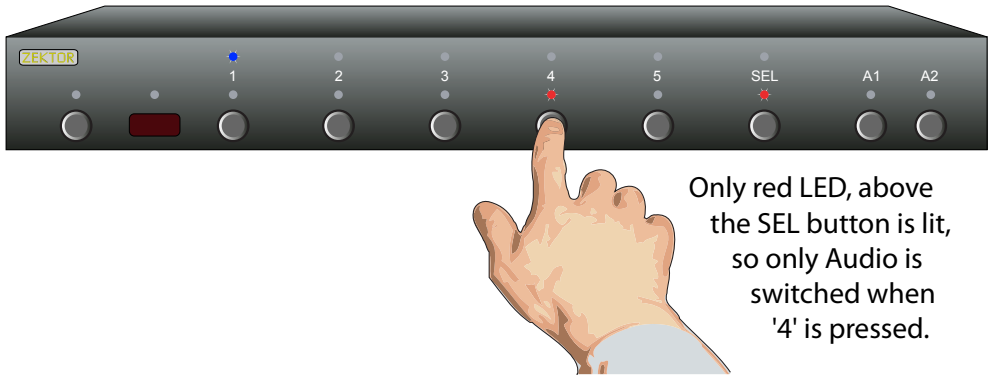
Step 1: Make the appropriate connections.

(Picture of back of HDVI5)

Selecting an Input: Press numbered buttons to select an input.



Audio / Video Breakaway: Press SEL to toggle breakaway options.



Only red LED, above the SEL button is lit, so only Audio is switched when '4' is pressed.

Easy, Simple, Instructions!

Initial Setup...

- Use the analog input connections to switch component video / composite video / analog audio or any combination of the above signals to the HDVI5's analog output connectors. Use the digital audio connectors to switch digital audio signals, with automatic conversion between the optical and coax digital audio formats.
- If using a hardwired IR controller to operate the HDVI5, connect the controller IR cable to the IR / Z-IN jack.
- If using a PC (or other serial controller), connect it to the RS-232 port using a standard serial cable.
- Plug the power module into the HDVI5, and plug the module into a standard A.C. wall receptacle. The standby LED will light up.

Selecting an Input...

- To switch between any of the five inputs, simply press the button for the desired input. If the HDVI5 is in the standby, it will turn on. The HDVI5 will then switch to the selected input, and the associated LED will light to indicate this.
- To place the HDVI5 back into the standby mode, press and release the Power Toggle button. The channel LEDs will all go blank, and the standby LED will light up. Press the Power Toggle button again to re-select the previously selected input.

Audio / Video Breakaway...

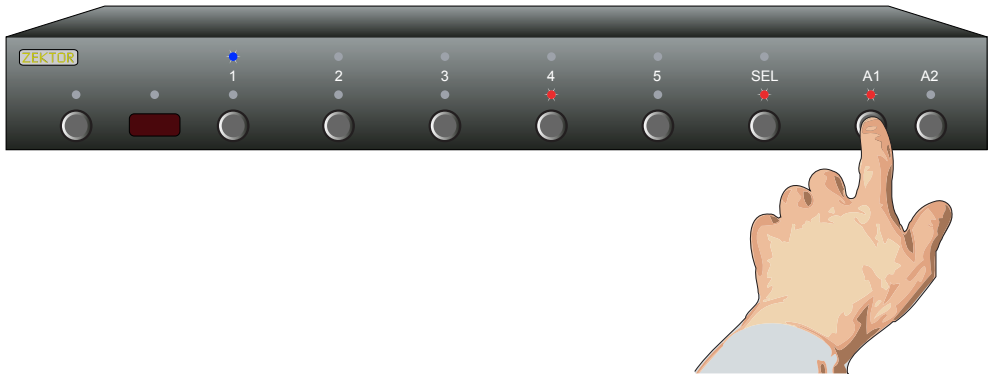
- To breakaway the audio or video (to listen to the audio from one input while view the video from another), press the SEL key. When both the RED and BLUE LEDs above the SEL button are lit, then the audio and video inputs will be switched simultaneously. When only the RED LED is lit, then only the Audio will be switch. Similarly, when only the BLUE LED is lit, only the video will be switched when pressing an input button.

Note: Audio breakaway only applies to the digital audio connections on the back of the HDVI5. You cannot breakaway the HDMI audio channel that is sent over the HDMI cable. HDMI audio will always follow the video signal.

Auxiliary Relay Connections

(Picture of RELAY connections)

Auxiliary Relay Operation: Use A1 and A2 buttons to toggle relays.



Using a Remote Control: Use nearly *ANY* remote to select an input.

Turn to the next chapter for simple instructions on how to setup the HDVI5 for use with any existing remote!

Easy, Simple, Instructions!

Auxiliary Relay Connections...

- The auxiliary relay contacts are rated at 30volts @ 5amps, and can be used to switch on and off anything you can think of within those limits.
- Each relay has a Normally Open connection, two Common connections, and a Normally Closed connection.

Auxiliary Relay Operation...

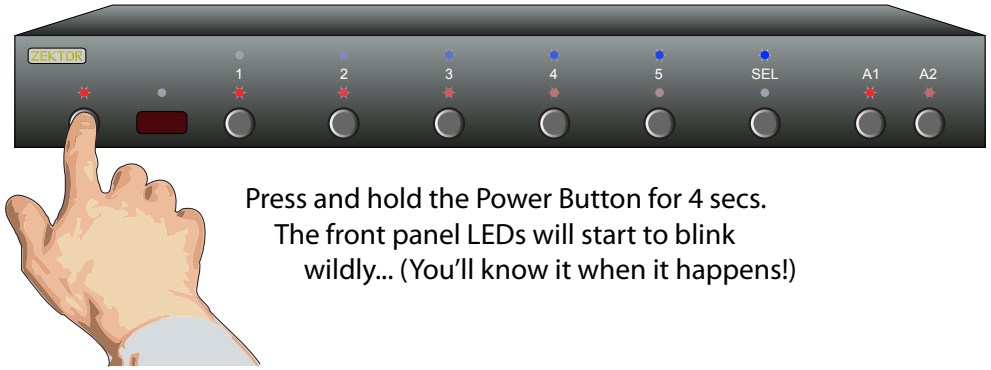
- The A1 and A2 buttons are used to toggle on and off the relays.
- The relays can also be setup to turn off after a given amount of time. See (TBD) chapter for relay setup information.

Using a Remote Control...

- *Use nearly any remote to control your HDVI5!*
- Using any remote to operate the HDVI5 is a simple matter of pairing up the HDVI5 with the remote. The remote doesn't have to be a universal remote (although it can be), any remote from an old TV or VCR will work just fine.
- Using Zektor's exclusive Intelligent-IR™, setup is easy! The HDVI5 does all the work!

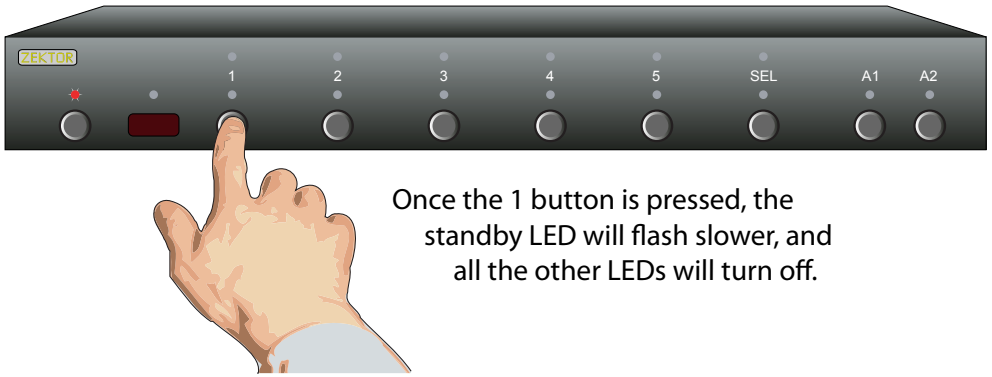
Turn to the next chapter for simple instructions on how to pair up the HDVI5 with any remote!

Step 1: Put the HDVI5 into the Setup Mode



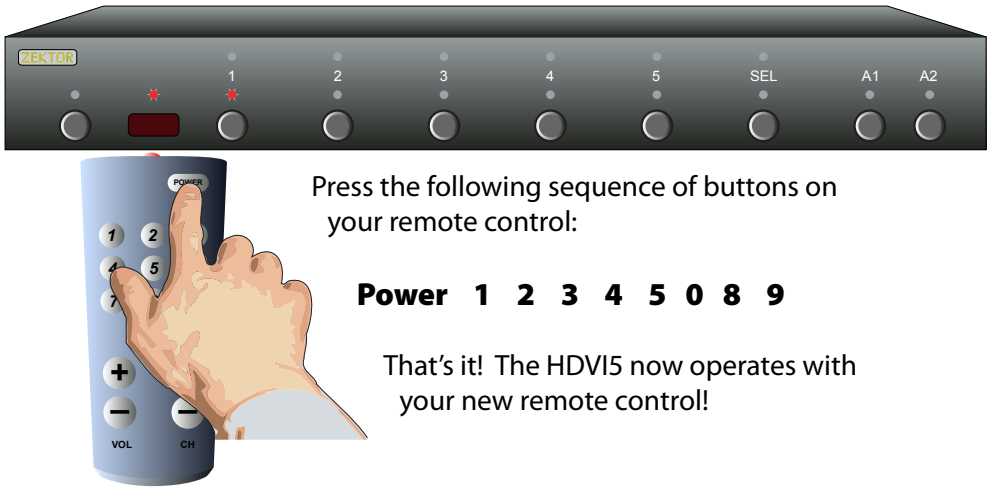
Press and hold the Power Button for 4 secs. The front panel LEDs will start to blink wildly... (You'll know it when it happens!)

Step 2: Press the '1' button for Intelligent-IR™ learning



Once the 1 button is pressed, the standby LED will flash slower, and all the other LEDs will turn off.

Step 3: Teach the HDVI5 its new IR codes



Press the following sequence of buttons on your remote control:

Power 1 2 3 4 5 0 8 9

That's it! The HDVI5 now operates with your new remote control!

Three Simple Steps to a Remote!

The HDVI5 features Zektor's Exclusive Intelligent-IR™, and with very few exceptions can be setup to use any remote you can point at it!

Pick a remote, any remote!

- Start by picking the remote you'd like to use with the HDVI5. If the remote you plan on using is not programmable (for instance, from an old TV), skip the next step.
- If you plan on using a universal remote, start by setting it up as a remote for a TV or VCR that you do not own. (For instance if you don't own a Sony TV, setup your universal remote to control a Sony TV.)

Step 1: Put the HDVI5 into the Setup Mode

- The HDVI5 is placed into the setup mode by pressing and holding the Power button for about 4 seconds.

Step 2: Select the Intelligent-IR™ Learn Mode

- There are many options available in the setup mode, but for now all we're interested in is the Intelligent-IR™ learning mode. This is selected by pressing the '1' button.
- Once the '1' button is pressed, the standby LED will flash slower and all the other LEDs will turn off. The HDVI5 is now waiting for new IR codes to be sent from your remote control.

Step 3: Teach the HDVI5 your new remote control codes

- On your remote control, press the following buttons, in the following order:

  Power 1 2 3 4 5 0 8 9

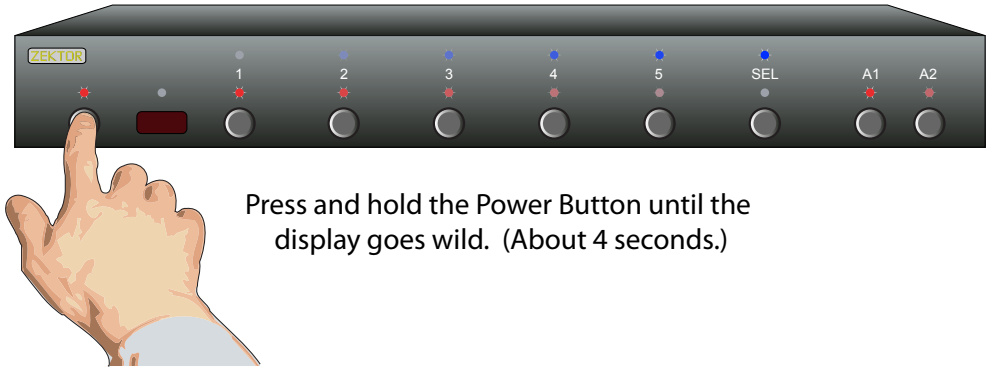
- That's it! The HDVI5 will return to the state it was in before setup, and will now work with your new remote!

The new control buttons on your remote are...

Power	Toggles the HDVI5's power.
1 - 5	Selects inputs 1 through 5.
0	Sequences the SEL button (A/V breakaway).
8	Toggles Auxiliary Relay 1.
9	Toggles Auxiliary Relay 2.

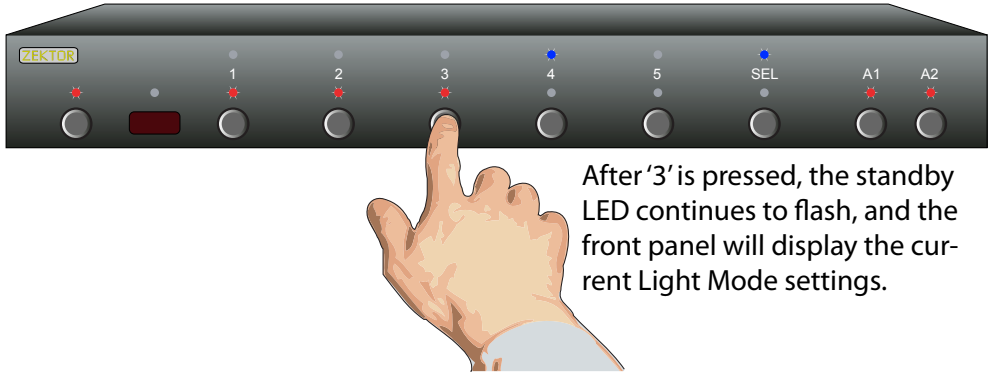
Note: All remote control codes are saved in non-volatile memory and will not be lost during a power failure.

Step 1: Place the HDVI5 into the Setup Mode



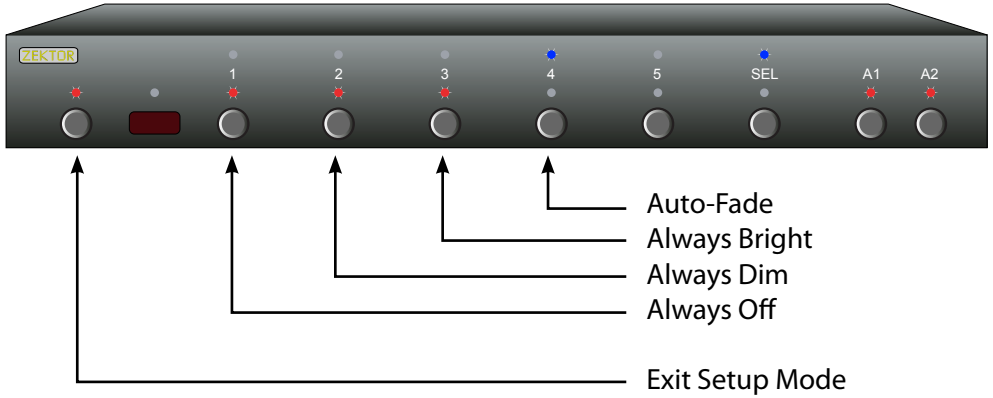
Press and hold the Power Button until the display goes wild. (About 4 seconds.)

Step 2: Select "Lighting Mode" option



After '3' is pressed, the standby LED continues to flash, and the front panel will display the current Light Mode settings.

Step 3: Choose a new lighting mode



Controlling the Front Panel Lights

There are four different front panel light modes available on the HDVI5. They are:

- Front panel lights automatically fade from bright to dim after 4 seconds of inactivity.
- Front panel lights are always at the bright level.
- Front panel lights are always at the dim level.
- Front panel lights are turned off.

Note: The intensities of the both the bright and dim levels can be adjusted as well, this is explained on the next page.

To change the front panel lighting mode...

Step 1: Enter the Setup Mode

- The HDVI5 is placed into the setup mode by pressing and holding the Power button for about 4 seconds.

Step 2: Select the Lighting Mode option

- Press the '3' button to select the "Lighting Mode" option.
- The front panel selection LEDs now indicate the currently selected light mode as follows:

  If '1's blue LED is lit, then front panel lights are always off.

  If '2's blue LED is lit, then front panel is always dim.

  If '3's blue LED is lit, then front panel is always bright.

  If '4's blue LED is lit, then front panel lights auto-fade from bright to dim after 4 seconds of inactivity.

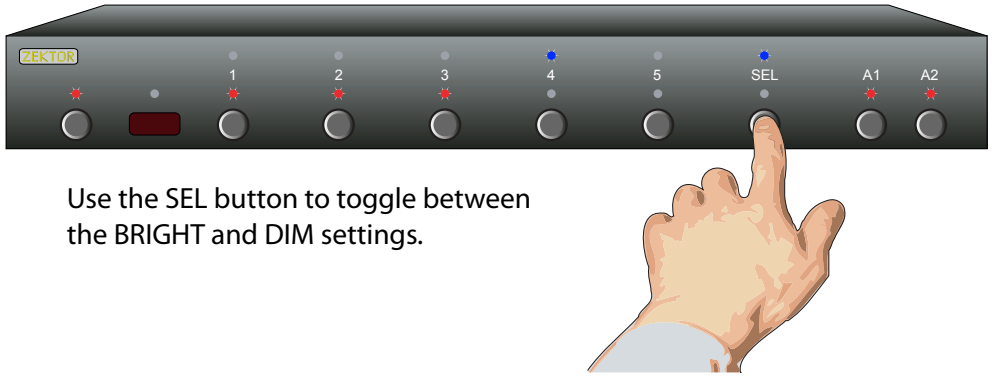
Step 3: Choose a new lighting mode

- Choose a new light control mode by pressing the associated selection button.
- Press the Power Button to save the new mode and return to normal operations.

Note: The lighting mode setting is saved in non-volatile memory and is not affected by a power failure.

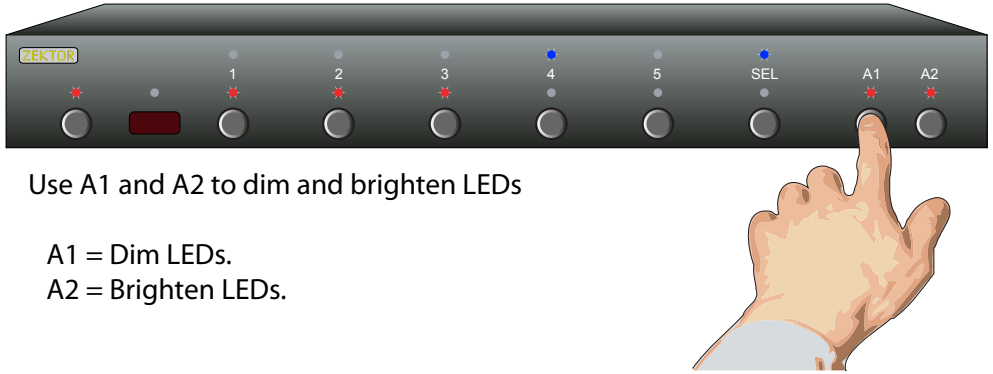
Turn to the next page for instructions on how to adjust LED intensities...

Step 4: Select between Bright and Dim settings: Use SEL button.



Use the SEL button to toggle between the BRIGHT and DIM settings.

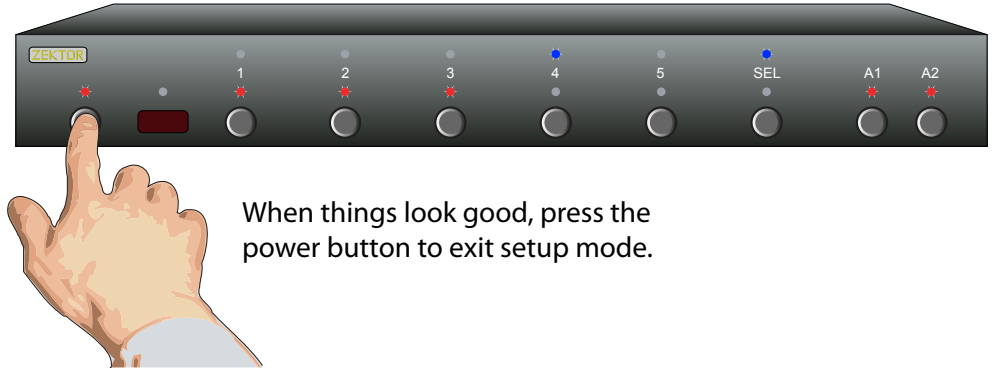
Step 5: Adjust Front Intensities.



Use A1 and A2 to dim and brighten LEDs

A1 = Dim LEDs.
A2 = Brighten LEDs.

Step 6: Use the Power Button to Exit.



When things look good, press the power button to exit setup mode.

Adjusting the Front Panel Intensity

Continued from previous page...

If you have not already done so, perform Steps 1 and 2 on the previous page.

Step 4: Toggle between Bright and Dim Settings

- The 'SEL' LED indicates the front panel intensity settings:
  If BLUE LED is lit, then the BRIGHT level is being adjusted.
  If RED LED is lit, then the DIM level is being adjusted.
- Use the 'SEL' button to toggle between bright and dim settings.

Step 5: Adjust Front Panel Intensities

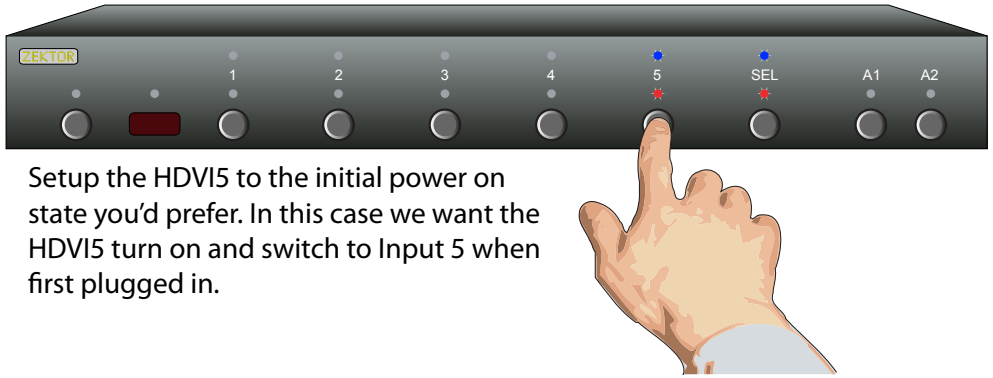
- Use the 'A1' button to decrease the intensity of the front panel lights.
- Use the 'A2' button to increase the intensity of the front panel lights.
- You cannot make the DIM level brighter than the BRIGHT level, and you cannot make the BRIGHT level dimmer than the DIM level.

Step 6: Use the Power Button to Exit

- Once the front panel intensities are acceptable, press the Power button to save the new settings and exit the setup mode.

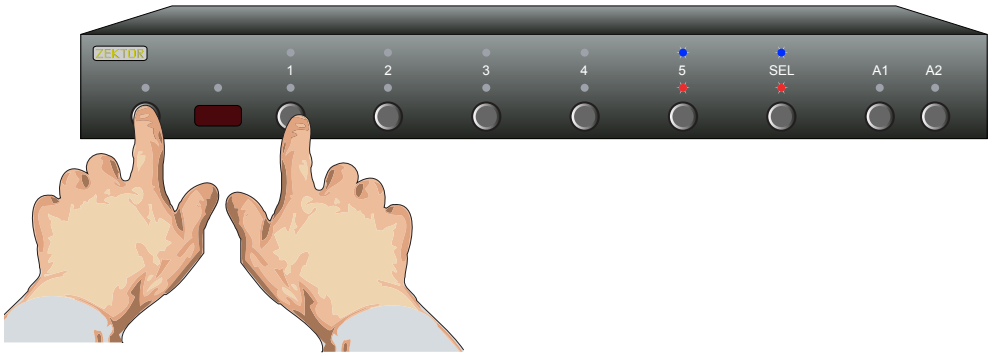
Note: The new intensity settings are saved in non-volatile memory and are not affected by a power failure.

Step 1: Set the HDVI5 to the preferred initial power on state



Setup the HDVI5 to the initial power on state you'd prefer. In this case we want the HDVI5 turn on and switch to Input 5 when first plugged in.

Step 2: Save the new initial power on state



1. Start by pressing and holding the Power button...

2. ...while continuing to hold the Power button, press and hold the '1' button.

3. After about 4 seconds, the display will flash indicating the new power on state has been accepted.

Setting the Initial Power On State

As long as the HDVI5 is plugged in, it will remember the previously selected input in standby mode. When powered up by pressing the Power button, it will return to that previously selected channel.

However, if power is removed (for instance a plug strip used to power the HDVI5 is turned off), and then re-applied, the HDVI5's default behavior is to enter into the standby mode.

It is possible to change the power on behavior of the HDVI5.

To change the power on defaults...

Step 1: Setup the HDVI5 to your preferred power on state.

- Use the front panel buttons to setup the HDVI5 to the operating settings you'd like at initial power up.

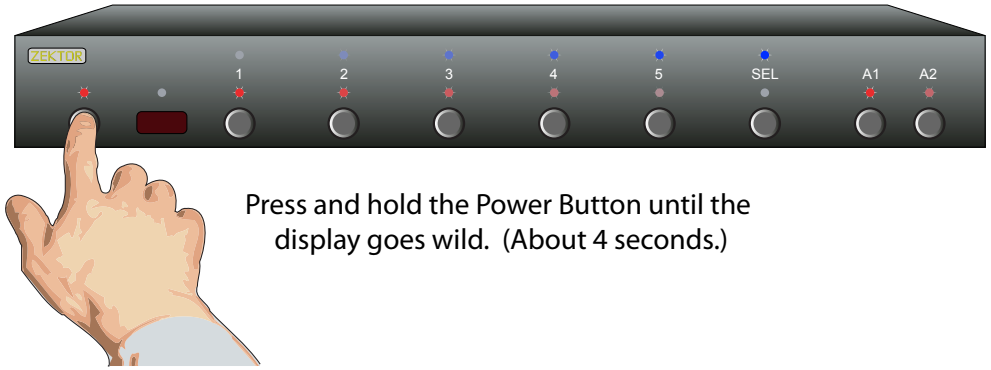
Step 2: Save the new initial power on state.

1. First press and hold the Power button.
2. While continuing to hold the Power button, press and hold the '1' button.
3. After holding both buttons for about '4' seconds, the display will blink indicating the new power on defaults have been accepted.

Test the new initial power on state

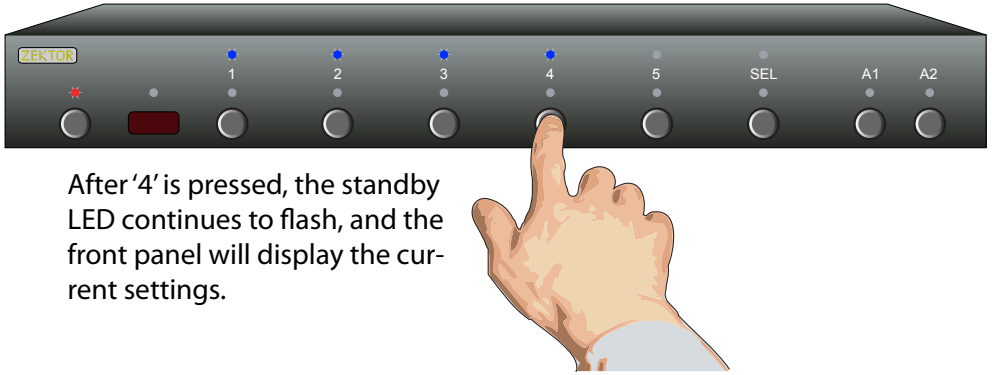
- You can test the new defaults by either disconnecting the power supply from the back of the HDVI5 or by unplugging the power supply from the wall.
- Reconnect power. The HDVI5 will power up into your new power on default state.

Step 1: Place the HDVI5 into the Setup Mode



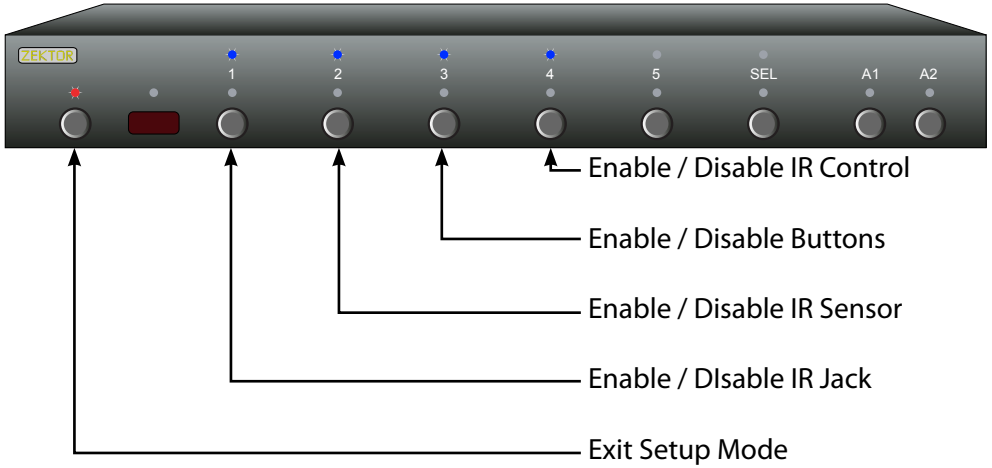
Press and hold the Power Button until the display goes wild. (About 4 seconds.)

Step 2: Enter the Enable / Disable control state.



After '4' is pressed, the standby LED continues to flash, and the front panel will display the current settings.

Step 3: Enable or Disable Front Panel and / or IR Control Functions



Disabling Front Panel or Remote

If you are using the rear panel IR jack, you might want to disable the IR sensors to prevent use of the remote control.

Or if you have a household with young curious fingers that likes playing with buttons, you also have the capability of disabling the front panel switches and only operating the HDVI5 with a remote.

To enable / disable the front panel switches or remote capabilities...

Step 1: Enter the Setup Mode

- The HDVI5 is placed into the setup mode by pressing and holding the Power button for about 4 seconds.

Step 2: Enter the Enable / Disable control state

1. While in the setup mode, press '4' to enter the Enable / Disable control state. The current status will be displayed using the front panel LEDs.
2. A Blue LED indicates an option is enabled, and Red LED indicates disabled.

Step 3: Enable or Disable Front Panel and / or IR control

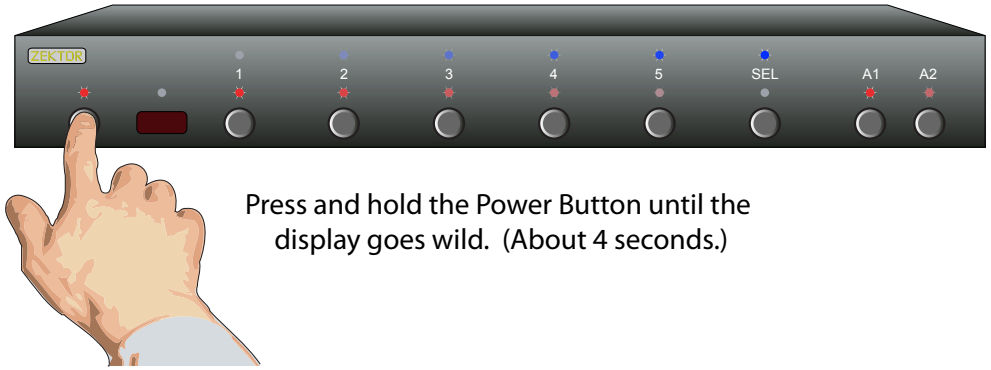
1. Use '1' to enable / disable the IR Jack hardware.
2. Use '2' to enable / disable the IR Sensor hardware.
3. Use '3' to enable / disable the front panel buttons.
4. Use '4' to enable / disable IR control.

Note 1: When disabling the IR Jack and IR Sensor, the actual hardware is disabled. Whereas 'IR Control' enables / disables whether the HDVI5 responds to IR signals received. The difference mostly concerns reading IR signals through the RS-232 port. If the IR Sensor and Jack are enabled, and 'IR Control' disabled, IR signals can still be read through the RS-232 port, while being ignored by the HDVI5.

Note 2: Disabling the front panel buttons does not disable the ability to enter the Setup Modes. Even with the front panel disabled you can perform the above steps, allowing you to once again enable the front panel buttons.

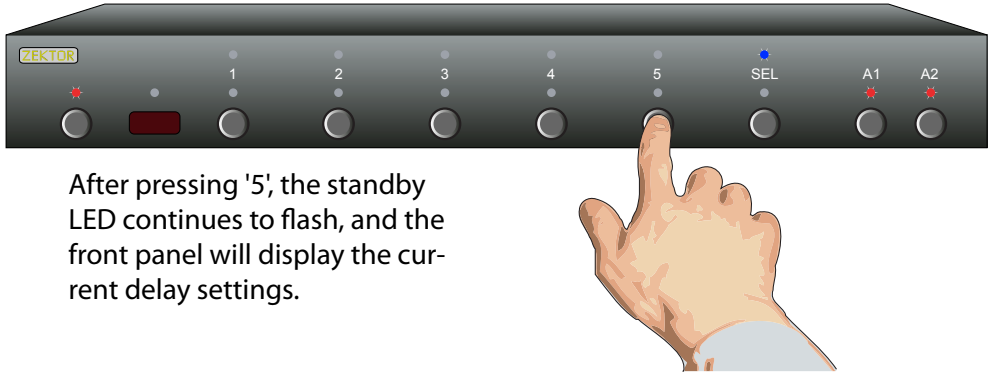
Note 3: The new settings are saved in non-volatile memory and are not affected by a power failure.

Step 1: Place the HDVI5 into the Setup Mode



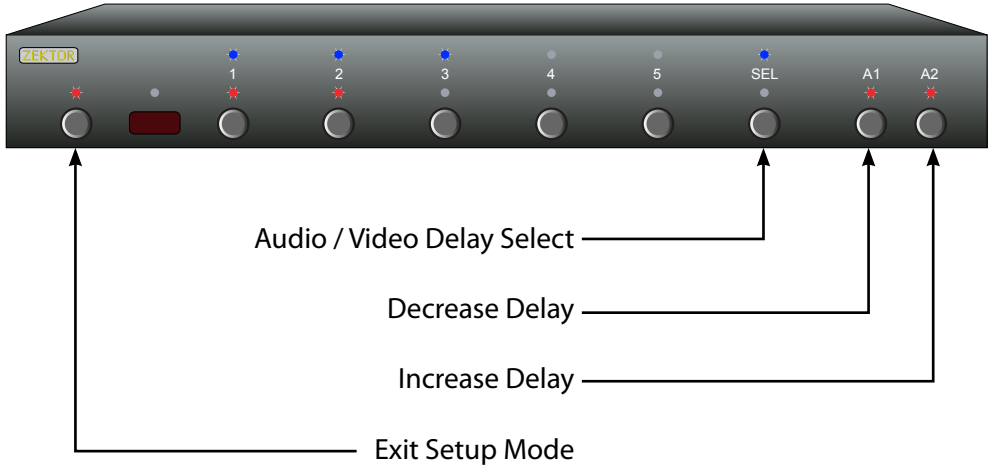
Press and hold the Power Button until the display goes wild. (About 4 seconds.)

Step 2: Enter the Switching Delay Setup Mode.



After pressing '5', the standby LED continues to flash, and the front panel will display the current delay settings.

Step 3: Enable or Disable Front Panel and / or IR Control Functions



Changing Switching Delays

The HDVI5 allows adjusting the switching delay times, for Video and Audio, independently. By default the HDVI5 uses a 200ms video delay and no audio delay when switching between channels. The HDMI specifications calls for a minimum of 100ms, some monitors may require much larger delay times to switch reliably.

To adjust the Audio / Video switching delays...

Step 1: Place the HDVI5 into the Setup Mode

- The HDVI5 is placed into the setup mode by pressing and holding the Power button for about 4 seconds.

Step 2: Enter the Switching Delay Setup Mode

- Press the '5' button to enter the Switching Delay Setup Mode.
- The Blue LEDs indicate the Video mute delay, if there are no Blue LEDs lit, then there is no video delay.
- The Red LEDs indicate the Audio mute delay, if there are no Red LEDs lit, then there is no audio delay.

  One lit LED indicates a 100ms second delay.

  Two lit LEDs indicates a 200ms second delay.

  Three lit LEDs indicates a 1/2 second delay.

  Four lit LEDs indicates a 1 second delay.

  Five lit LEDs indicates a 2 second delay.

Step 3: Adjust Switching Delay Times

- The 'SEL' button selects between the Video delay setting and the Audio delay setting.
- The 'A1' and 'A2' buttons are used to set the delay times

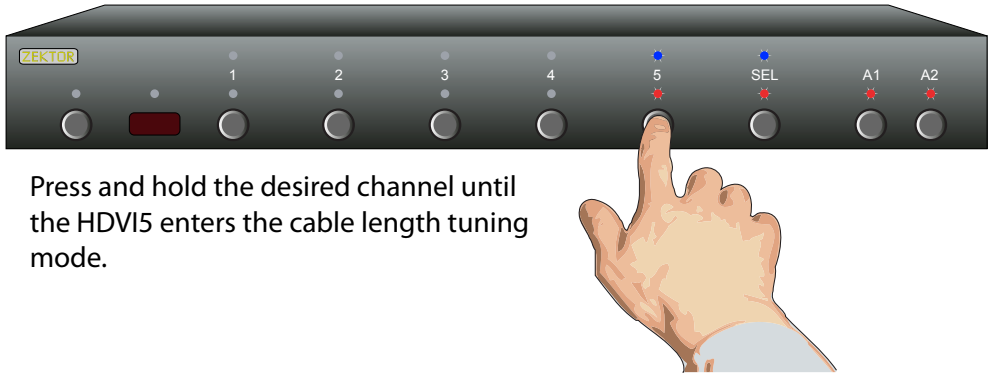
  'A1' decreases the delay time.

  'A2' increases the delay time.

  Press the Power button to save new settings and exit.

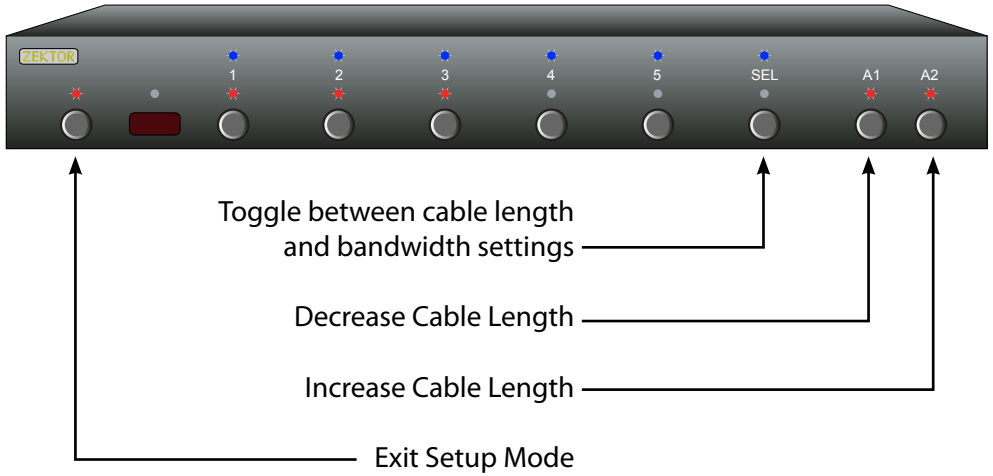
Note: The new settings are saved in non-volatile memory and are not affected by a power failure.

Step 1: Place the HDVI5 into the Cable Length Tuning Mode



Press and hold the desired channel until the HDVI5 enters the cable length tuning mode.

Step 2: Adjust cable length settings



Input Cable Length Tuning

The DVI / HDMI Specification is very specific on its ouput specifications and little can be done in the way of pre-emphis on the output to drive longer cables without falling outside of the specifications. It is up to the DVI /HDMI receiver to adjust for cable length difference by applying equalization in the inputs to compensate for the losses that occur with varying length cables.

The HDVI5 allows for 15 levels of equalization. Using high quality DVI or DVI to HDMI conversion cables, the HDVI5 can compensate for cables of up to 20 meters (65ft), on its inputs and still reliably receive a stable, sparkle free image at 1080p.

Output cable lengths are very much a function of the monitor's receiver's cabalities. The HDVI5 uses source termination to compensate for all lengths of output cables, and to help in cases where the receiver may not have followed the specifications properly.

To tune an HDVI5's input to a cable length...

Step 1: Place the HDVI5 into the Cable Length Adj Mode

- Press the desired input and hold the button for 4 seconds, until the HDVI5 enters the Cable Length Adj Mode.

Step 2: Enter the Cable Length Adj Mode

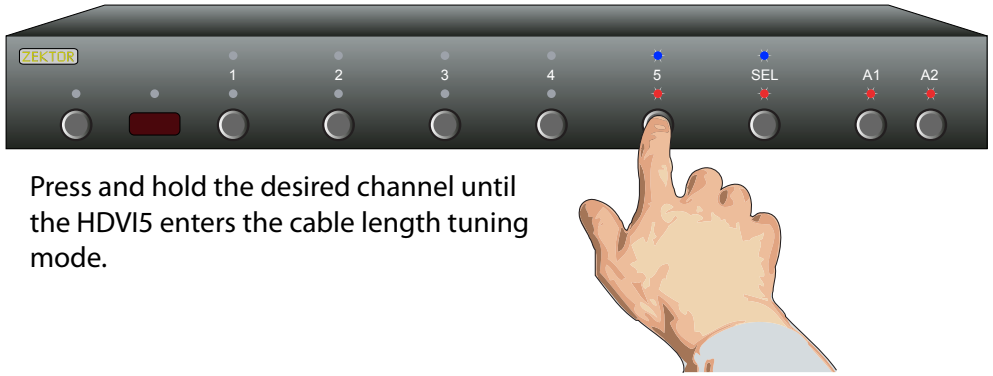
- Use the 'A1' and 'A2' buttons to tune cable length.
  'A1' adjusts for shorter cables.
  'A2' adjusts for longer cables.
  'SEL' switches to Bandwidth settings (See next page).
- Short cables are indicate by only Red LEDs being lit.
- Medium length cables are indcated by only Blue LEDs lit.
- Long cables are indicated by Blue & Red LEDs being lit.

When a cable's tuning is too short, the display will begin to sparkle, eventually going blank. The best results are to start long, and use a length a step or two above any noticable artifacts on the screen.

Overcompesating a short cable by tuning it as a long cable can lead to reflections on the line and decrease its noise margin.

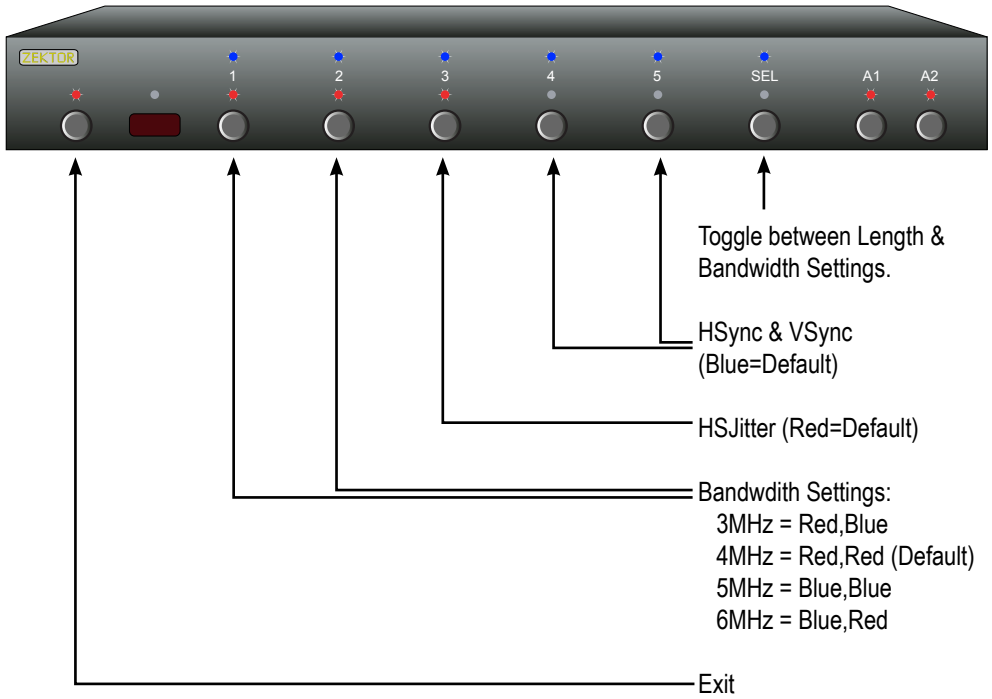
Note: Each input can be tuned individually and all settings are saved in non-volatile memory and are not affected by a power failure.

Step 1: Place the HDVI5 into the Cable Length Tuning Mode



Press and hold the desired channel until the HDVI5 enters the cable length tuning mode.

Step 2: Adjust Bandwidth and Sync Settings



Bandwidth & Sync Settings

The HDVI5 is a fully digital switch, unlike many similar products, the HDVI5 decodes the DVI / HDMI signal and re-encodes it on the output. This allows it to correct for many non-compliant devices attached to its inputs, and still generate fully compliant HDMI /DVI data on the outputs.

The following parameters are usually best left alone and will have no affect on a fully compliant DVI / HDMI source, but may be useful when connecting to a non-compliant source.

Bandwidth: This setting allows the HDVI5 to sync to sources with clocks that are unstable and are outside the DVI / HDMI specifications. The larger the bandwidth, the better able to lock on to non-standard sources at the expense of being more suseptible to noise. Some PC cards may require this value to be set high (6MHz) to work reliably.

HSync and VSync: These settings default to having no effect on the HSync a VSync signals. If a source and monitor will not work with each other, using the HDVI5 and setting these signals low (Red LEDs lit) may allow them to.

HSJitter: Some non-compliant sources can generate horizontal jitter, causing the screen to jump back and forth horizontally. This setting can eliminate this problem on all standard resolutions. It may not work on some non-standard resolutions.

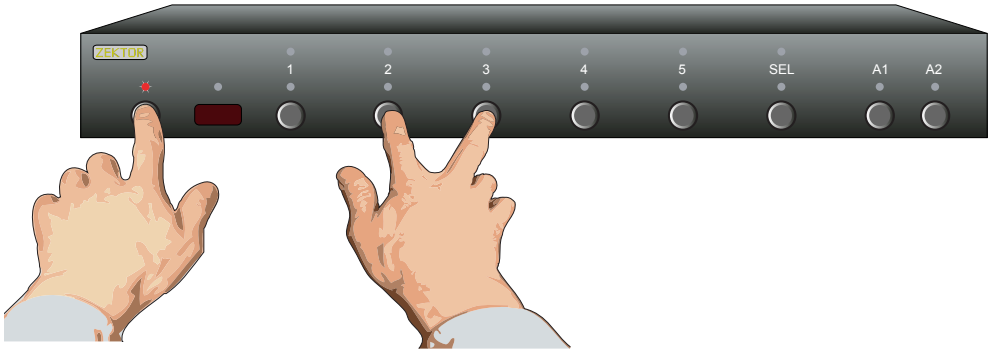
Step 1: Place the HDVI5 into the Cable Length Adj Mode

- Press the desired input and hold the button for 4 seconds, until the HDVI5 enters the Cable Length Adj Mode.

Step 2: Switch to the Bandwidth & Sync settings

- Press the 'SEL' to toggle between Length and Bandwidth.
- Use '1' and '2' set the HDVI5's receiver's bandwidth.
  - 3MHz = LED '1' Red & LED '2' Blue.
  - 4MHz = LED '1' Red, LED '2' Red. (Default, HDMI Spec)
  - 5MHz = LED '1' Blue, LED '2' Blue.
  - 6MHz = LED '1' Blue, LED '2' Red.
- Use '3' to set 'HSJitter' (BLUE=Enabled, Red=Default)
- Use '4' to set HSync (BLUE=Default, Red=Sync always 0)
- Use '5' to set VSync (BLUE=Default, Red=Sync always 0)

Step 1: Reset All Parameters to Factory Defaults



1 Start by pressing and holding the Power button...

2 ...while continuing to hold the Power button, press and hold both the '2' and the '3' buttons.

3 After about 4 seconds, the display will flash indicating all parameters have been restored to their factory programmed values.

Resetting to Factory Defaults

If, for whatever reason, you'd like to reset your HDVI5 back to its factory default condition, this is easily done...

Step 1: Reset All Parameters to Factory Defaults

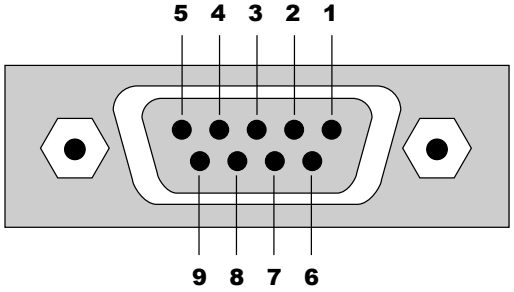
1. First press and hold the Power button
2. While continuing to hold the Power Button, press and hold both the '2' and '3' buttons.
3. After holding all buttons for about 4 seconds, the display will flash indicating all parameters have been restored to their factory programmed values.

The RS-232 Port

The RS-232 on the HDVI5 is the same format as a PC-modem, and uses the same type cable as a serial modem would, which is a standard straight through cable. Do not use a cable that is marked as a "Null Modem" cable.

The HDVI5 can also be used with any USB to RS-232 conversion cable, these are all typically straight through cables.

The RS-232 port is a female type DE-9 connector (sometimes mistakenly referred to as a DB-9 connector) with the following pinout:



Pin definitions:

1 - No Connect	6 - No Connect
2 - TX	7 - No Connect
3 - RX	8 - No Connect
4 - No Connect	9 - No Connect
5 - GND	

The port settings used by the HDVI5 are:

Baudrate:	9600
Data Bits:	8
Stop Bits:	1
Parity:	NONE

The communications protocol used is Zektor's exclusive K.I.S.S.™ (Keep It Simple Serial™) protocol.

K.I.S.S.™ (Keep It Simple Serial!™)

Zektor's exclusive K.I.S.S.™ (Keep It Simple Serial™) protocol was designed by engineers who have been controlling RS-232 devices for most of their careers and understand the pitfalls of a badly designed protocol.

A few features of the K.I.S.S.™ protocol are:

- A simple and logically consistent command structure.
- Fully bi-directional operations and can operated in both a Master Slave mode (only responds when spoken to), or in an Asynchronous mode (state changes are sent as they occur).
- All commands and responses can optionally use a checksum or a CRC-8 checkcode to insure reliable communications.
- A command will always generate a response! There are no "timeout" states as part of the protocol. A timeout will always indicate some type of physical connection error (loose cable, extreme noise, etc.).
- Commands and responses have been designed for simple parsing in any language.
- Easy to test using a terminal, or terminal emulation software. (Hyperterm, SecureCRT, etc.)

A few features of the HDVI5 command set are:

- A full featured command set that goes far beyond simple front panel control operations! Allows full control over *all* features of the HDVI5.
- Full notification of state changes.
- The ability to disable the front panel, and still have front panel button presses sent to the serial port.
- The ability to read all IR codes sent to the HDVI5 by any remote, even those not used by the HDVI5. Use the HDVI5 to add IR control to any project!
- *Many more features, too numerous to list here...*

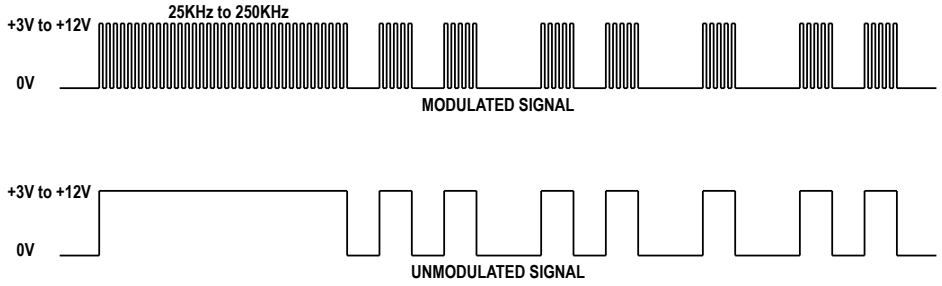
For a full description of K.I.S.S.™ and a list of the commands supported by the HDVI5, download the HDVI5 supplemental manual at:

www.zektor.com/HDVI5/downloads.htm

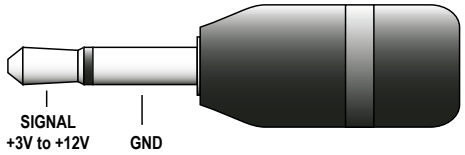
The Rear Panel IR Jack

The rear panel jack labeled "IR / Z-IN" allows the HDVI5 to be controlled by hardwired IR controllers.

The signal can be either modulated or unmodulated:



And uses a standard 1/8" (3.5mm) mini-plug:



The signal voltage can range from +3V to +12V, with a nominal value of +5V recommended.

The signal can be either unmodulated, or modulated with a modulation frequency ranging from 25KHz to 250KHz.

The IR jack recognizes the same IR codes as the front panel IR sensor.

Specifications

Specifications:

Digital Video Channels	
DVI / HDMI Bandwidth:	1.65GHz
HDTV Resolutions:	480p through 1080p, including 720p and 1080i (All Single Link DVI / HDMI modes supported)
HDCP:	Both DVI and HDMI HDCP modes supported
HDMI Audio:	Fully supports all HDMI Audio modes
PC Resolutions:	640x480p through 1920x1200p (All Single Link PC resolutions supported)
Digital Audio Channels	
Inputs:	5 Coax, 5 Optical, (Auto conversion between formats)
Outputs:	1 Coax, 1 Optical, (Simultaneous)
Maximum Transfer Rate:	13.2Mb/S
Digital Audio Modes:	PCM, DD5.1, DTS, All digital audio modes supported
Coax Input Level Range:	200mV - 7.0V (PC Soundcard Compatible)
Coax Output Level:	500mV Nominal
Control	
IR Sensor:	Modulation Frequency: 36KHz-40KHz
IR Jack:	+3V to +12V, Un-Mod. or 25KHz to 250KHz Mod. Freq.
Serial Port:	9600 Baud (8N1)
Power Requirements:	90-120VAC, 60Hz, 15W
Optional International:	90-264VAC, 47-63Hz, 15W
Power Supply:	Wall Mount, 9V @ 1200ma, U.L. Listed
Dimensions:	Rack Mountable, 17”W x 6.5”D x 1.75”H
Warranty:	**Two Year Parts and Labor**

Warranty Policy

Warranty Policy

ZEKTOR warrants this product against defects in material and workmanship under normal use and service for two years from the original date of purchase. ZEKTOR, at its option, shall repair or replace the defective unit covered by this warranty.

In order to keep this warranty in effect, the product must have been handled and used as prescribed in the instructions accompanying this warranty. This warranty does not cover any damage due to accident, misuse, abuse, or negligence. This warranty is valid only if the product is used as specified in the product documentation.

Repair or replacement, as provided under this warranty, is your exclusive remedy. ZEKTOR shall not be liable for any incidental or consequential damages. Implied warranties of merchantability and fitness for a particular purpose on this product are limited in duration to the duration of this warranty.

Some states/countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states/countries do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state and country to country.

Return & Exchange

Shipment of product is as advertised by product. Upon receipt of merchandise inspect product carefully, should you find that the product does not meet your expectations, or satisfaction, contact us at once and tell us your concerns, so we may make every effort to satisfy your purchase.

Contact Information

Instructions for Returning Items

Please retain the dated sales receipt as evidence of the date of purchase. You will need it for any warranty service. If you bought the product through a dealer, installer, or reseller, you will need to return the product to the point of sale.

E-mail us, or call us, using the information listed under "Customer Service Contact Information", for a Return to Manufacturer Authorization (RMA) number. Describe briefly the reasons for your requested return.

You must receive an RMA # before you return any goods to us. The RMA # must appear on your return packing label or on the outside of the box. Merchandise without a RMA # will be refused. RMA's are valid for twenty (20) days from date of issuance.

All returned merchandise must be shipped in the original packaging. If it is not in the original packaging, ZEKTOR will not be held liable for damage during shipment. Shipments of returns must be prepaid, and we will not accept COD returns.

Customer Service Contact Information:

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Poway, CA 92064

Phone: 858-748-8250
Fax: 858-748-8224
E-mail: customerservice@zektor.com
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